AMENDMENTS TO THE CLAIMS

Listing of the claims:

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

1. (Currently Amended) An information processing apparatus provided with an input system utilizing a stroboscope, comprising:

a stroboscope;

an imaging means for imaging an object at a light-emission and at a non-light-emission of said stroboscope to output an image signal at light-emission and an image signal at non-light emission;

a first means for calculating a part or all of information of a position, a size, a velocity, an acceleration, a moving path pattern of said object on the basis of differences between a plurality of said image signals at light-emission and a plurality of said image signals at non-light emission; and

a second means for performing information processing according to an application on the basis of the information calculated based on said differences by said first means to provide an output according to said application, wherein

said object to be imaged by said imaging means includes a retroreflective body.

2. (Currently Amended) An information processing apparatus according to claim 1, wherein said first means includes a determination means for determining whether or not said information based on said differences is coincident with a predetermined condition.

3. (Original) An information processing apparatus according to claim 2, wherein said first means further includes a valid input detecting means for detecting only a valid information out of said information on the basis of the determination result by said determination means, and transmitting to said second means as the valid information being performed.

4. (Original) An information processing apparatus according to claim 1, wherein said first means includes a distance calculating means for calculating a distance between said object and said imaging means from the information indicative of a size of said object.

5. (Original) An information processing apparatus according to claim 1, wherein said first means includes an analyzing means for analyzing information obtained from a difference between said image signal at light-emission and said image signal at non-light emission to extract a shape of said object, and an angle calculating means for calculating an angle between said object and said imaging means from said shape.

6. (Original) An information processing apparatus according to claim 5, wherein the analysis by said analyzing means is for extracting predetermined two points within said object, and the calculation of the angle by said angle calculating means is for calculating an angle between a line segment between the predetermined two points and a predetermined coordinate axis.

7. (Original) An information processing apparatus according to claim 1, wherein a time interval of the light-emission of said stroboscope is freely settable.

8. (Original) An information processing apparatus according to claim 1, wherein a length of the light-emission and a length of the non-light-emission of said stroboscope are freely configurable.

9. (Original) An information processing apparatus according to claim 1, wherein an exposure period of said imaging means is freely configurable.

10. (Canceled)

11. (Original) An information processing apparatus according to claim 1, wherein said stroboscope includes a light source for outputting a light having a specific wavelength range, and said imaging means responds to only said specific wavelength range.

12. (Original) An information processing apparatus according to claim 11, wherein said imaging means includes a filter for passing only said light having a specific wavelength range and an imaging device for imaging an image formed by the light that passes through the filter.

13. (Original) An information processing apparatus according to claim 11, wherein said imaging means includes an imaging device for imaging only the image formed by said light having a specific wavelength range.

14. (Original) An information processing apparatus according to claim 1, wherein each of said first means and said second means is a process to be processed by a single or a plurality of processors.

15. (Original) An information processing apparatus according to claim 1, wherein the information processing performed by said second means is an entertainment processing such as a game, etc.

16. (Currently Amended) A man-machine interface ~~system provided with an input system by use of a stroboscope,~~ comprising [[:]]

~~a stroboscope;~~

~~an imaging means for imaging an object at a light-emission and at a non-light-emission of said stroboscope to output an image signal at light-emission and an image signal at non-light emission;~~

~~a first means for calculating a part or all of information of a position, a size, a velocity, an acceleration, a moving path pattern of said object on the basis of differences between a plurality of said image signals at light-emission and a plurality of said image signals at non-light emission; and~~

~~a second means for performing information processing on the basis of the information calculated by said first means~~ an information processing apparatus provided with an input system utilizing a stroboscope, as recited in claim 1.

17. (Canceled)

18. (New) A storage medium storing a program by which a processor of an information processing apparatus provided with an input system utilizing a stroboscope executes the steps of:

an imaging step for imaging an object including a retroreflective body at a light-emission and at a non-light-emission of said stroboscope to output an image signal at light-emission and an image signal at non-light emission;

a first step for calculating a part or all of information of a position, a size, a velocity, an acceleration, a moving path pattern of said object on the basis of differences between a plurality of said image signals at light-emission and a plurality of said image signals at non-light emission; and

a second step for performing information processing according to an application on the basis of the information calculated based on said difference by said first step to provide an output according to said application.